

BOOK REVIEW

BRIAN E. S. GUNNING AND MARTIN W. STEER. 1996. **Plant Cell Biology: Structure and Function.** (ISBN 0-86720-504-0, pbk.; 0-86720-509-1 (hbk). Jones and Bartlett Publishers, 40 Tall Pine Drive, Sudbury, MA 01776. 800-443-5000. \$37.50. (plate numbers, no page numbers)

This book replaces the classic work, "Plant Cell Biology-An Ultrastructural Approach," published in 1975. It includes photographs made using the following microscopic techniques: conventional light, phase contrast, differential interference contrast, fluorescence (including fluorescence antibody and immuno-fluorescence), confocal laser scanning, transmission electron (TEM) and scanning electron (SEM). Many techniques involving anticlinal antibodies, serial optical sections, shadow casting, freeze-fracturing, freeze-etching, ultrathin, freeze substitution, and a variety of ancillary ones, are explained in detail in the text as well as in the legends.

The book is comprised of 60 plates in an 8.5 x 12" format, on high-gloss paper, with sometimes oversized labels for the sub-plates, and an accompanying text for each. Several black and white drawings scattered throughout the text are original artwork, but are not numbered. There is also one figure of a "generalised plant cell" that places the organelles and ultrastructural features of our beloved tetradodecahedron in perspective. The 60 plates are arranged in groups according to subject, and include the following sections: an introductory survey, nucleus, endoplasmic reticulum, Golgi apparatus and coated vesicles, vacuoles, mitochondria, nucleic acids in mitochondria and plastids, plastids, microbodies, cytoskeleton, cell division, transport between cells, vascular tissue, the plant surface, plant reproduction, the plant as a multicellular organism and the index.

Like its predecessor, this book is an instantaneous classic and a MUST for anyone teaching general biology or plant biology. The clear, concise text and fantastic images would serve the needs of everyone from high school biology advanced placement students to advanced undergraduate biology majors taking a cell biology course. I unhesitatingly recommend this excellent bargain to everyone!—*John J. Pipoly III.*